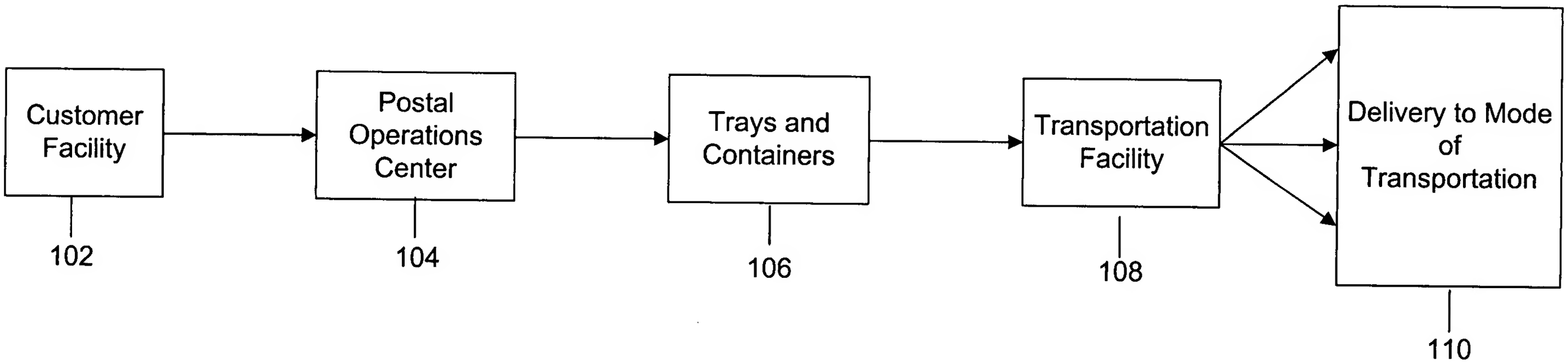

FIGURE 1A
Prior Art

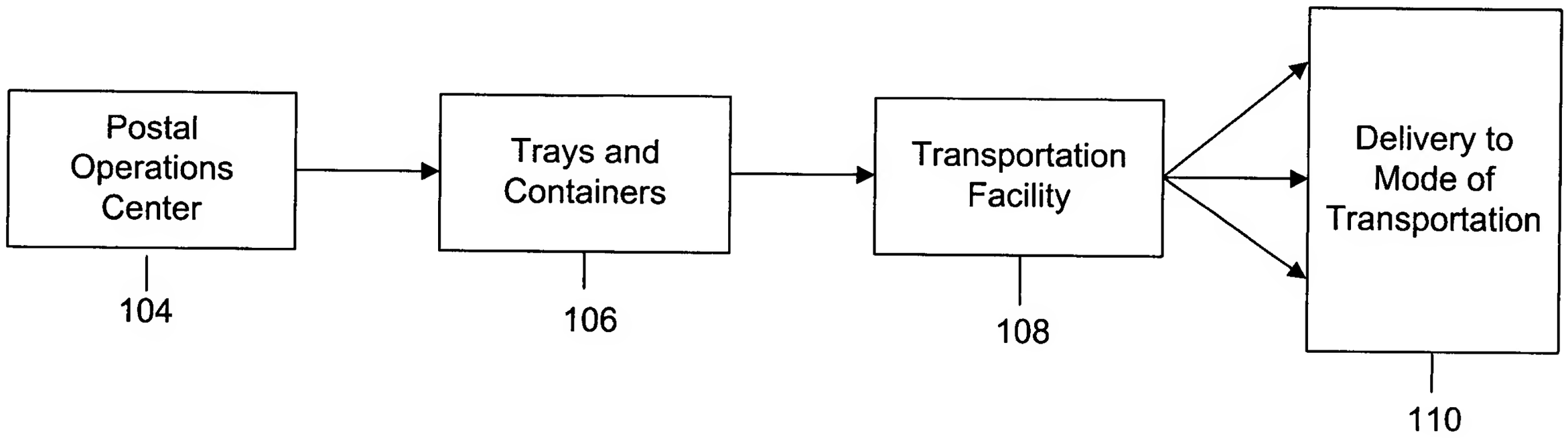

FIGURE 1B
Prior Art

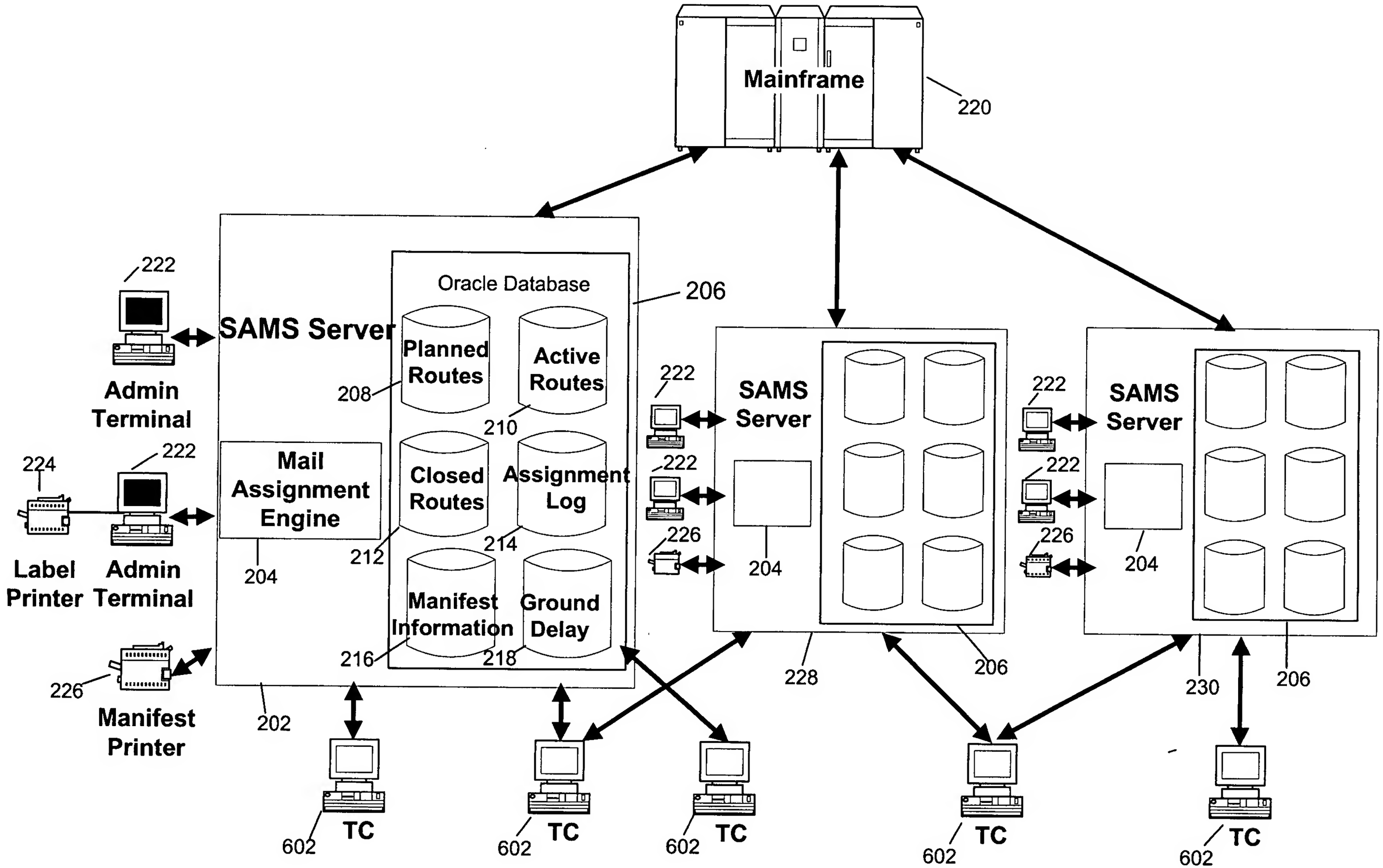
Mainframe
220
222
Admin Terminal
SAMS Server
206
Oracle Database
Planned Routes
208
Active Routes
210
Mail Assignment Engine
204
Closed Routes
212
Assignment Log
214
Manifest Information
216
Ground Delay
218
224
Label Printer
Admin Terminal
226
Manifest Printer
202
TC
602
222
SAMS Server
222
226
204
228
206
222
SAMS Server
222
226
204
230
206
TC
602

FIGURE 2

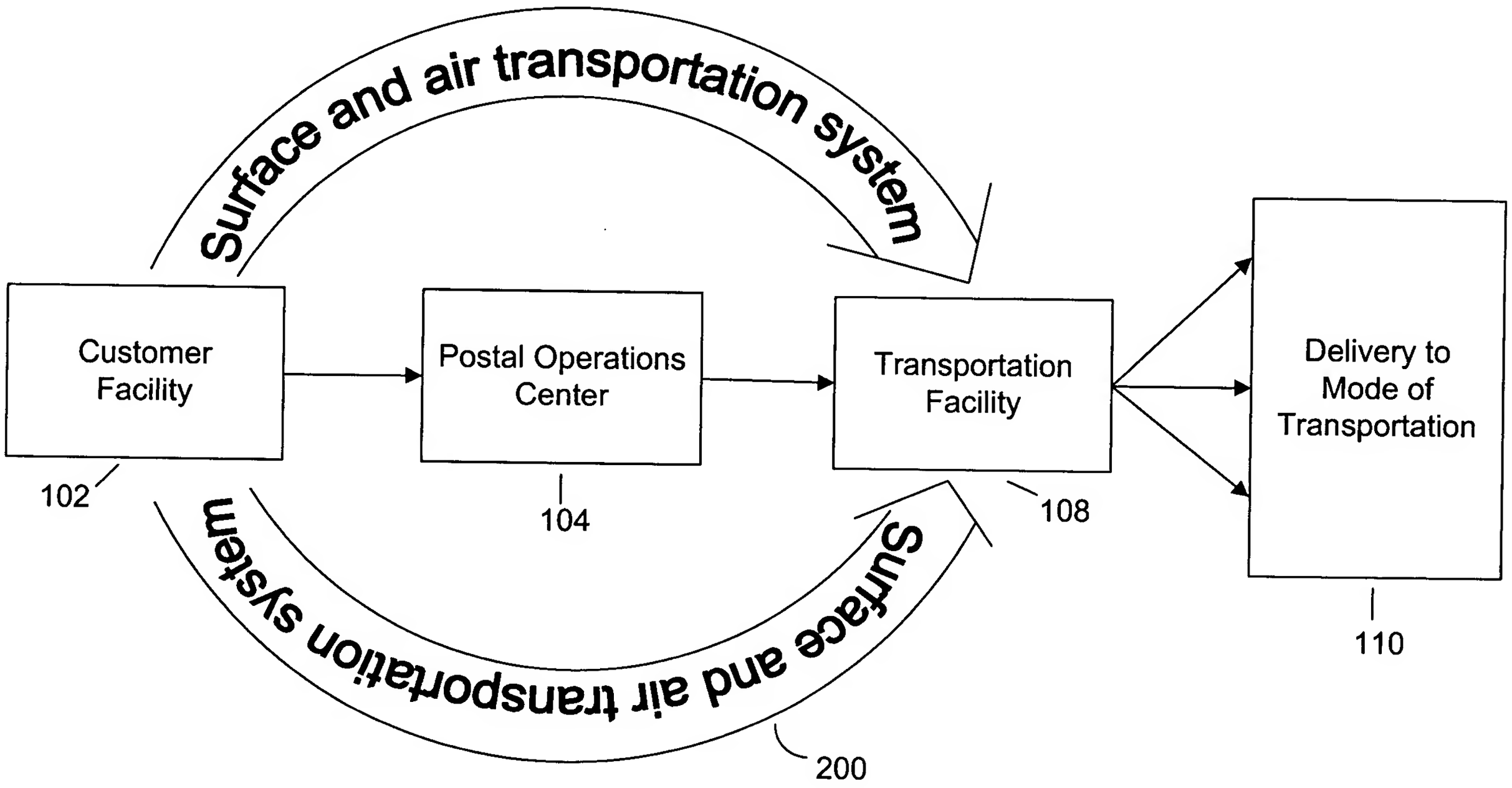
Surface and air transportation system
Customer Facility
Postal Operations Center
Transportation Facility
Delivery to Mode of Transportation
102
104
108
110
Surface and air transportation system
200

FIGURE 3A

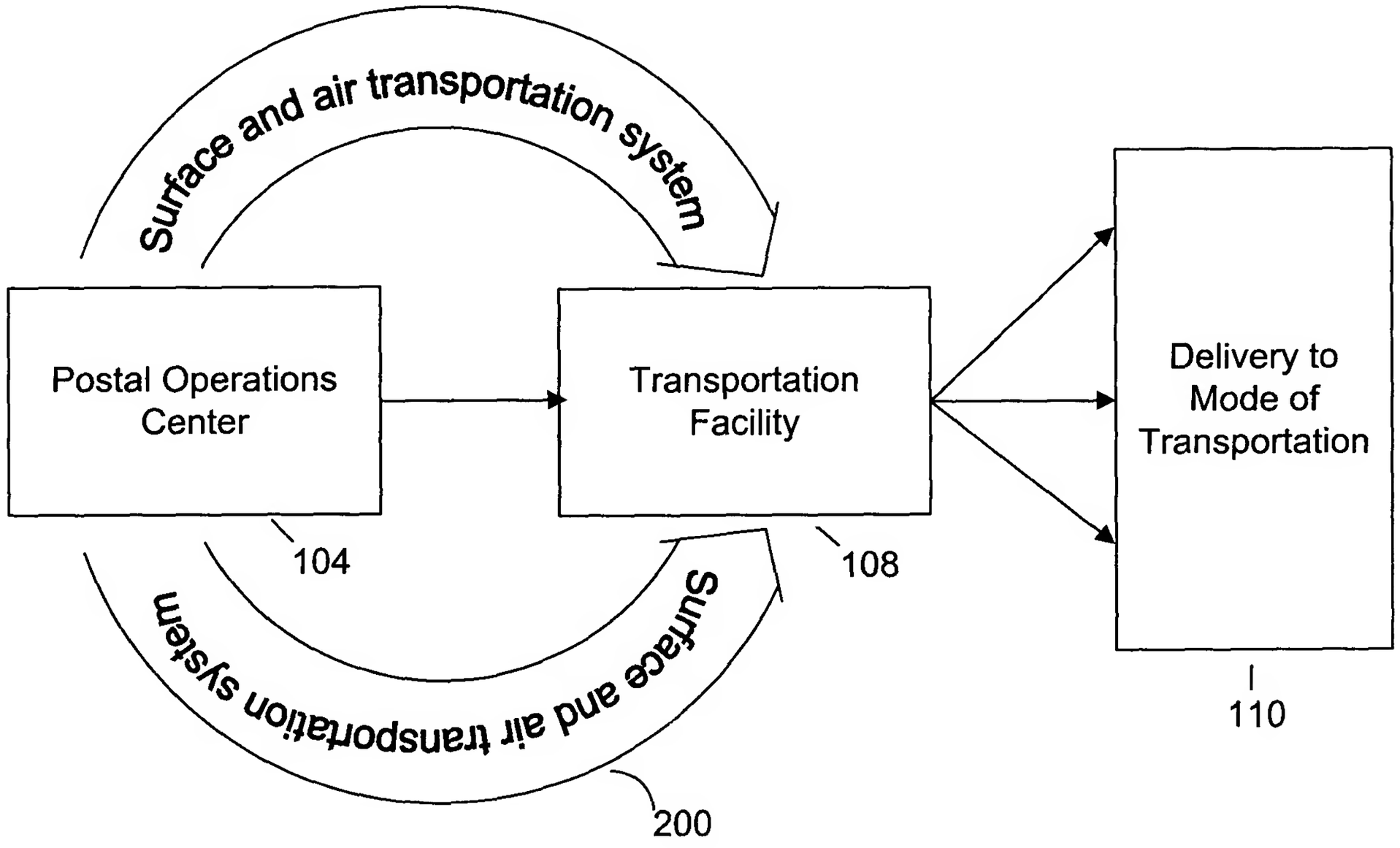
Surface and air transportation system
Postal Operations Center
Transportation Facility
Delivery to Mode of Transportation
104
108
110
Surface and air transportation system
200

FIGURE 3B

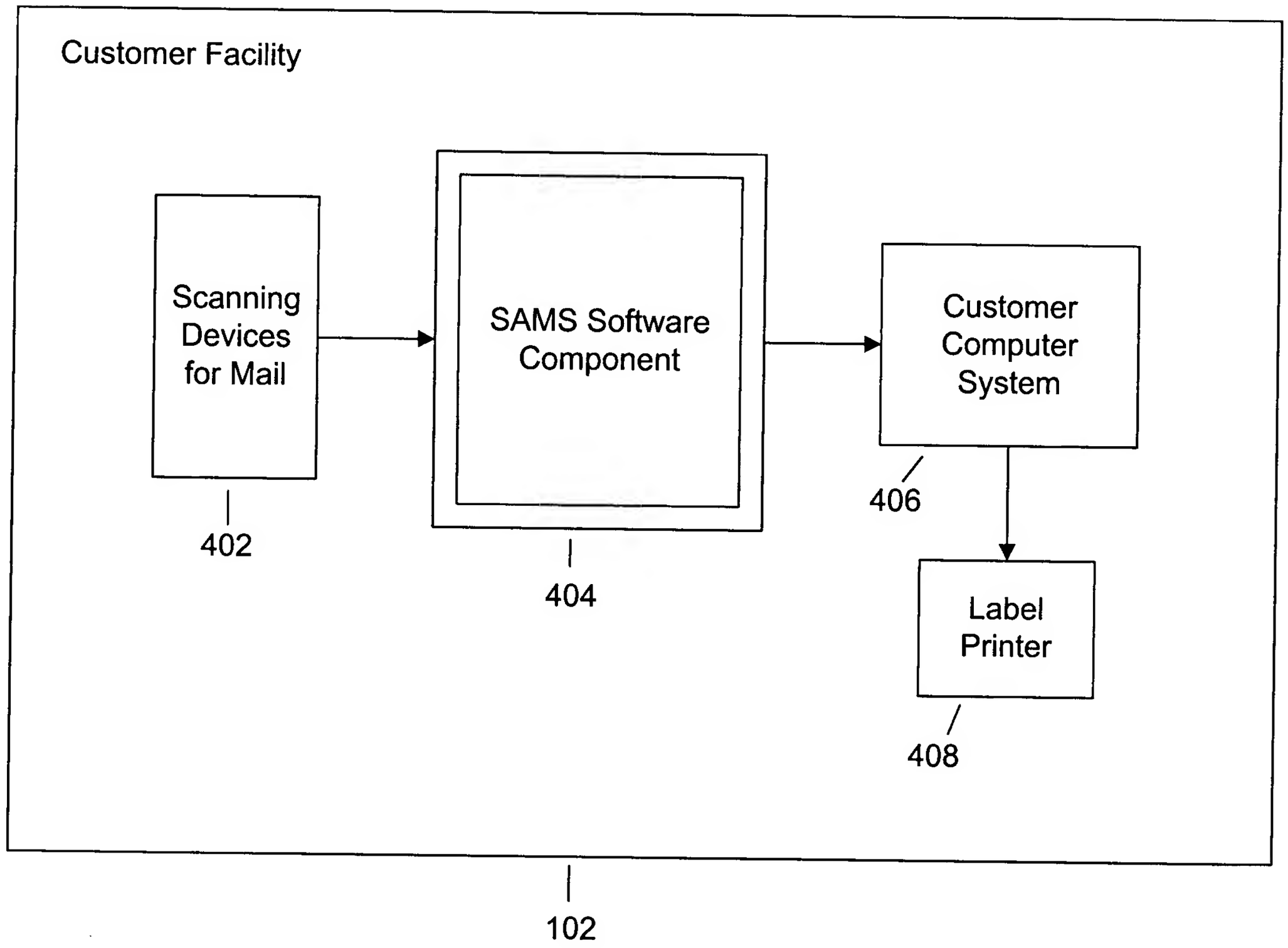
Customer Facility
Scanning Devices for Mail
SAMS Software Component
Customer Computer System
Label Printer
402
404
406
408
102

FIGURE 4

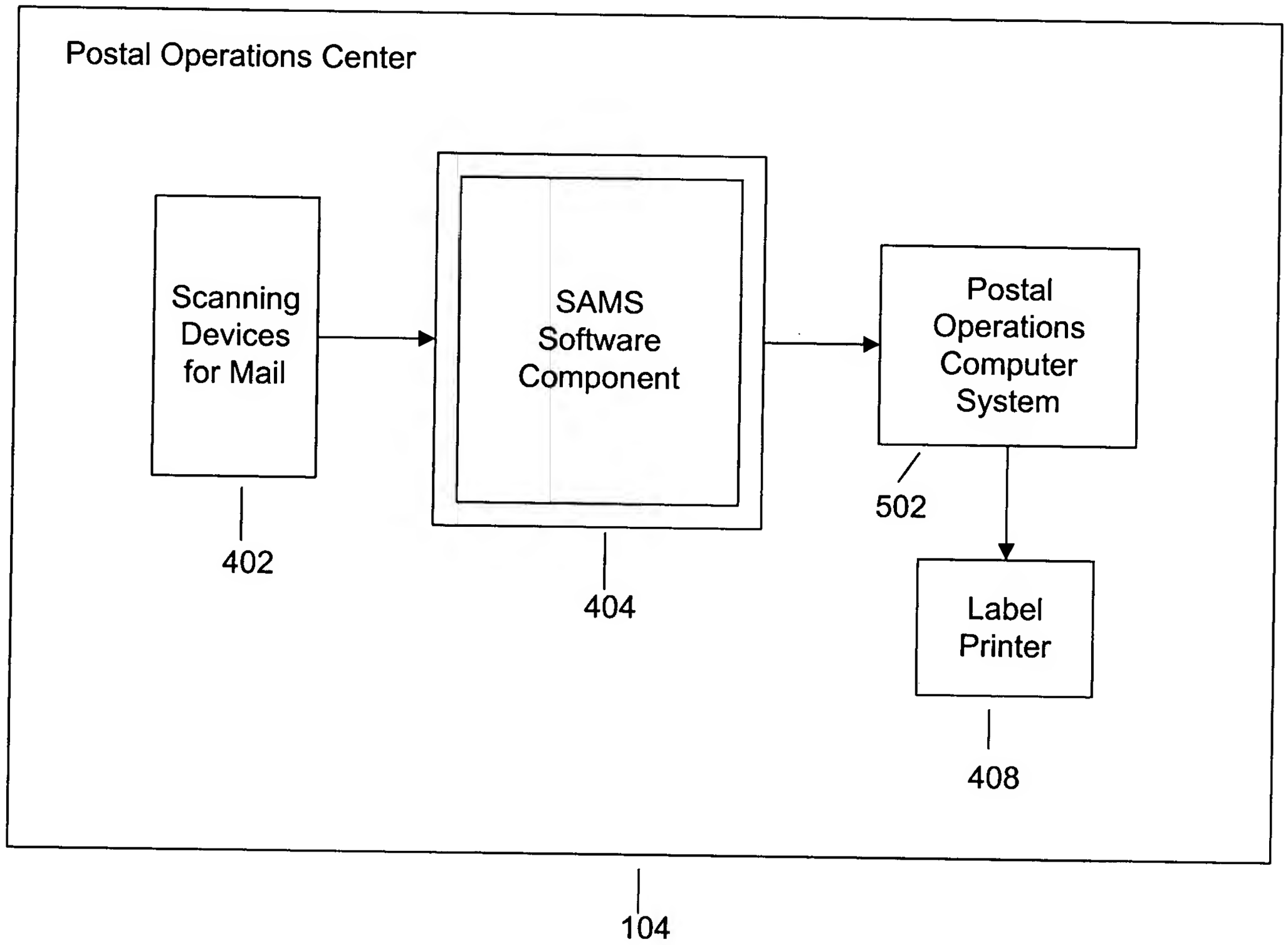
Postal Operations Center
Scanning Devices for Mail
SAMS Software Component
Postal Operations Computer System
502
Label Printer
402
404
408
104

FIGURE 5

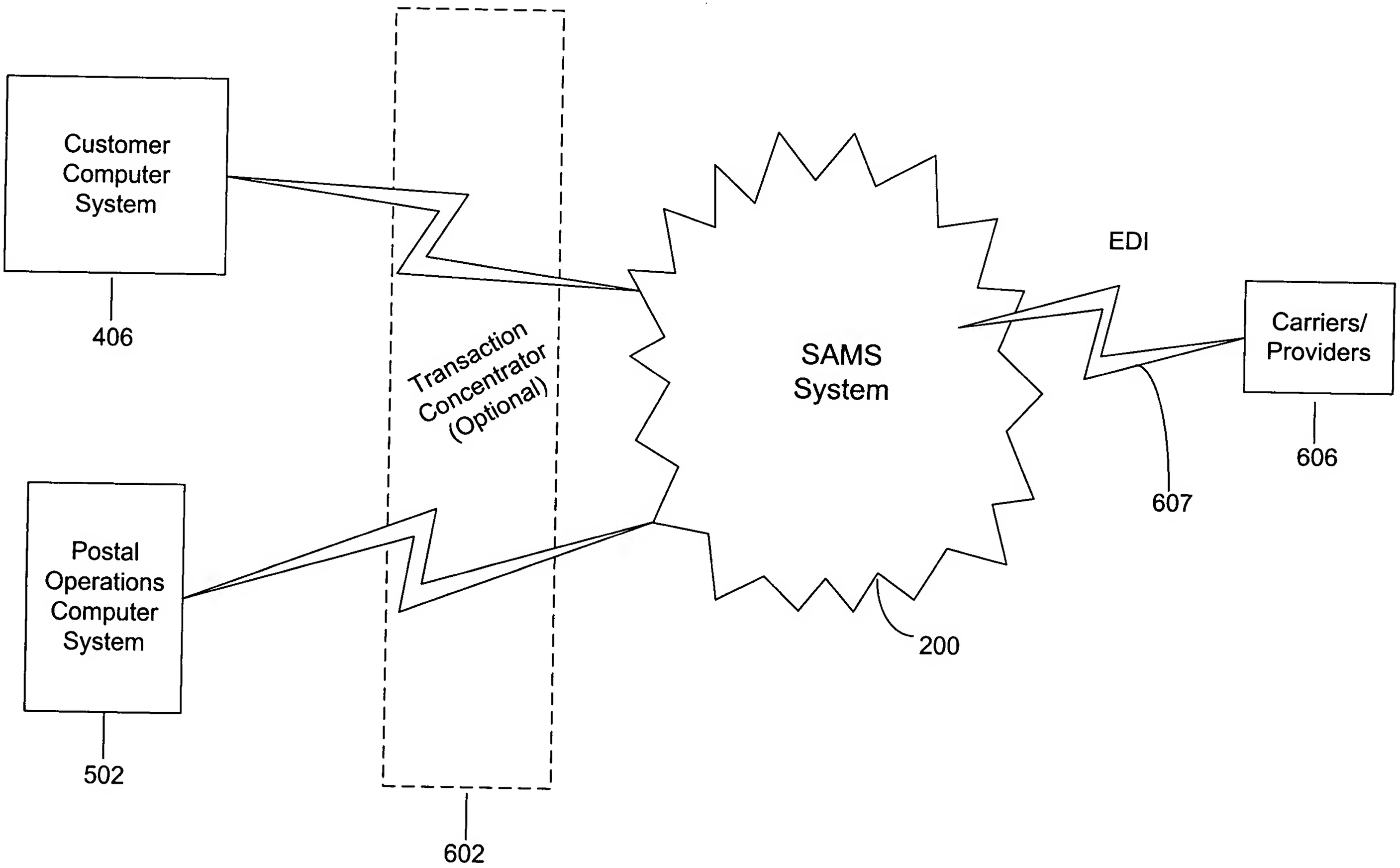
Customer Computer System
406
Transaction Concentrator (Optional)
SAMS System
EDI
Carriers/ Providers
606
607
Postal Operations Computer System
502
602
200

FIGURE 6

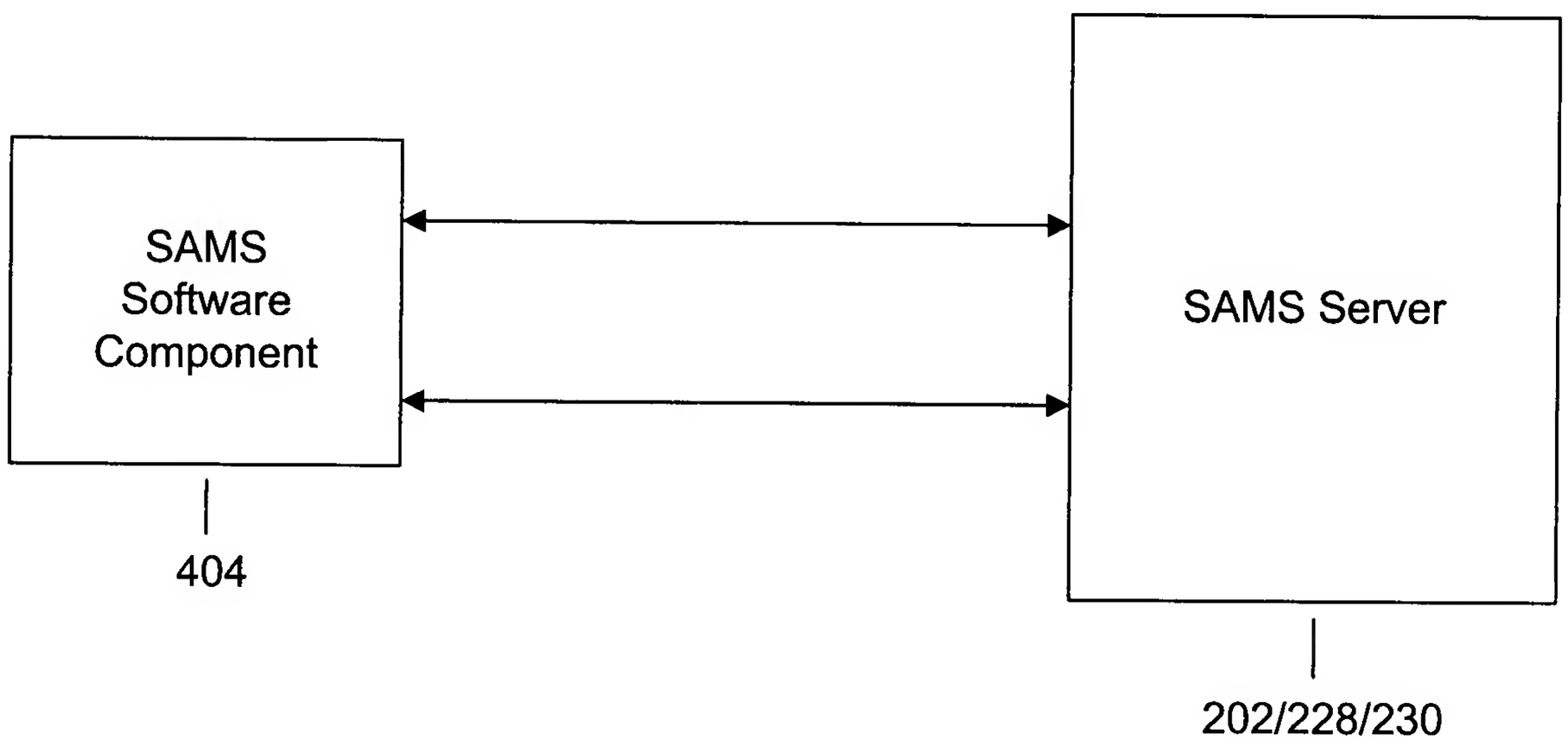

FIGURE 7

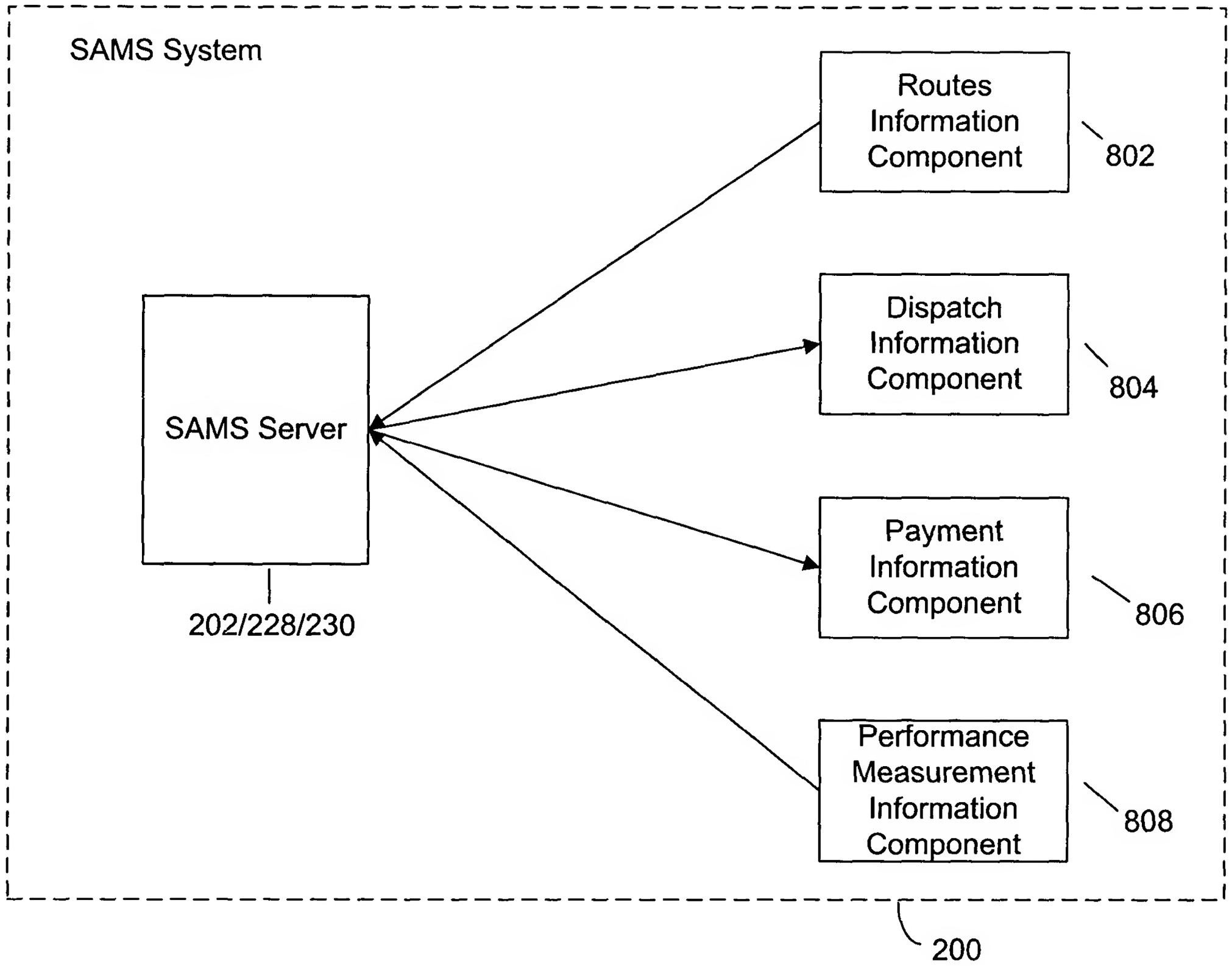
SAMS System
SAMS Server
202/228/230
Routes Information Component
802
Dispatch Information Component
804
Payment Information Component
806
Performance Measurement Information Component
808
200

FIGURE 8

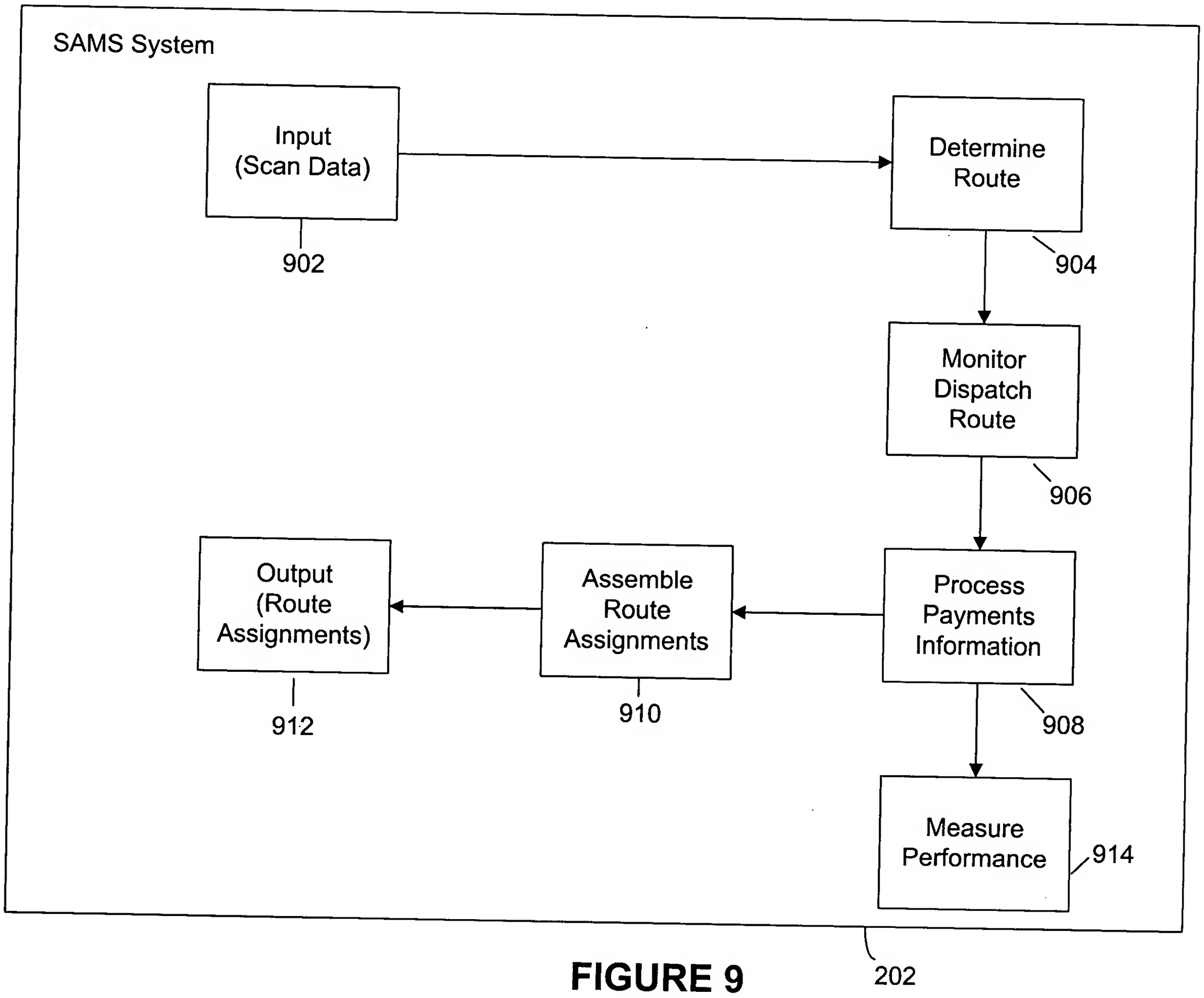
SAMS System
Input
(Scan Data)
902
Determine
Route
904
Monitor
Dispatch
Route
906
Process
Payments
Information
908
Assemble
Route
Assignments
910
Output
(Route
Assignments)
912
Measure
Performance
914
202

FIGURE 9

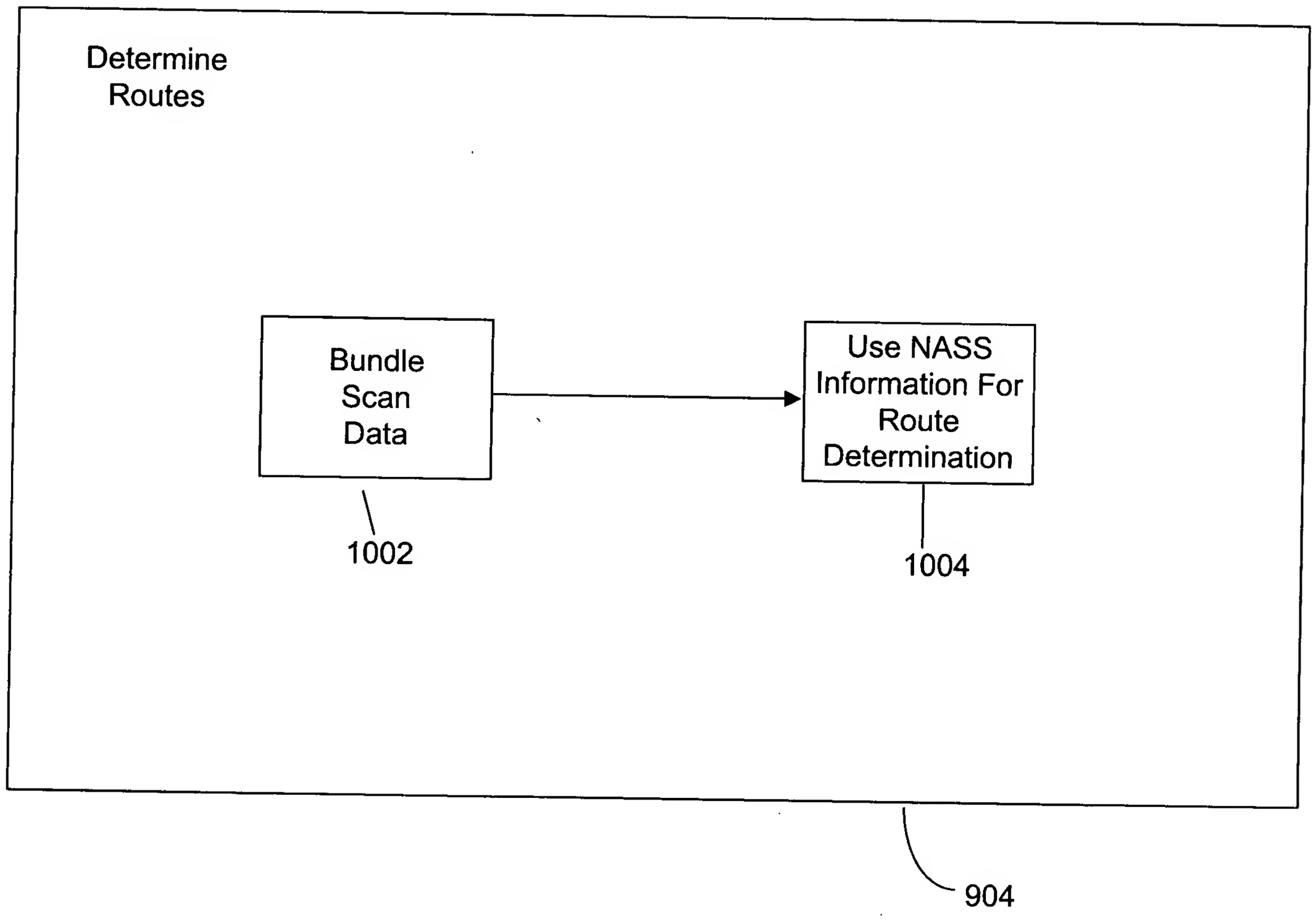
Determine
Routes
Bundle
Scan
Data
1002
Use NASS
Information For
Route
Determination
1004
904

FIGURE 10

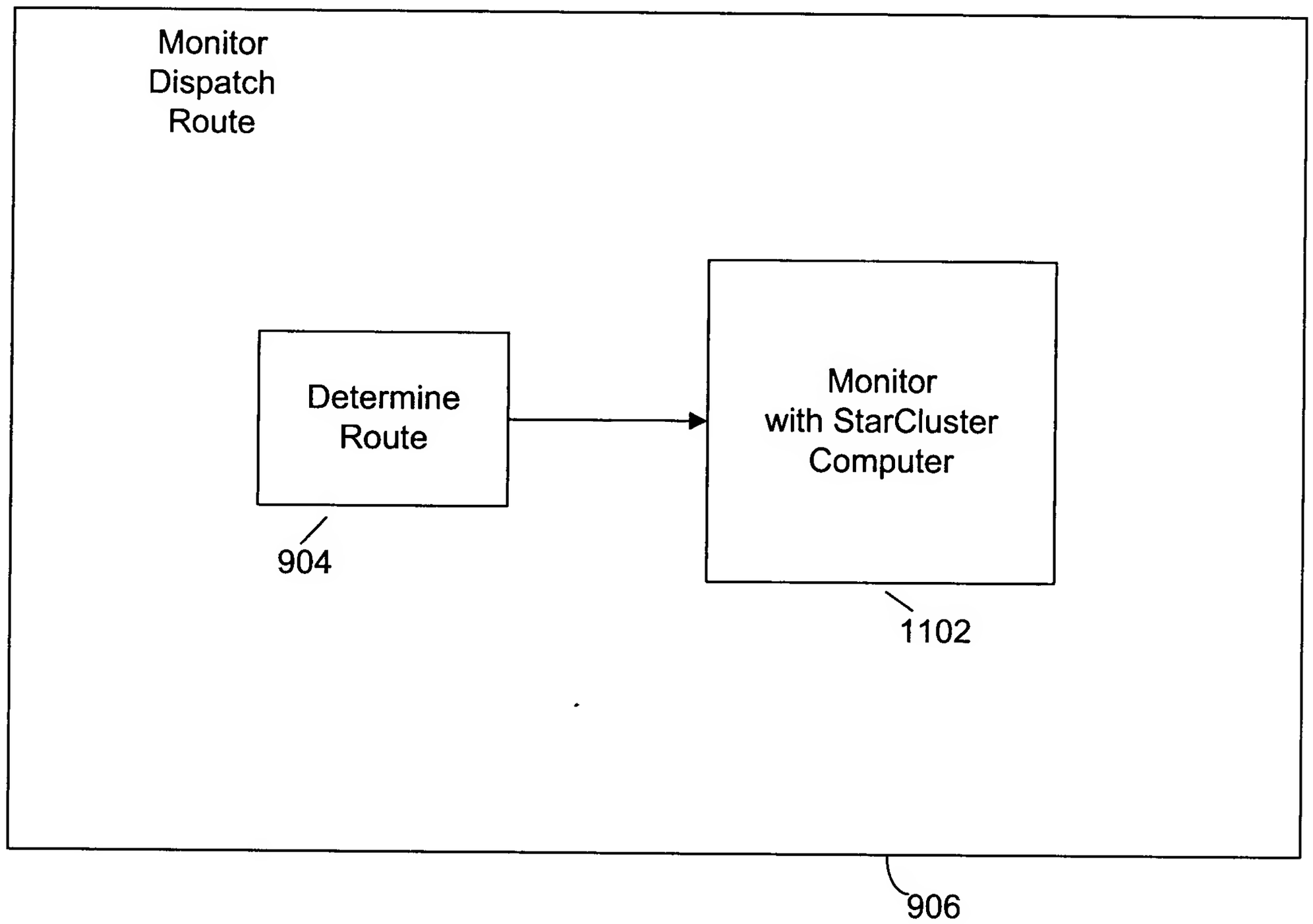
Monitor
Dispatch
Route
Determine
Route
904
Monitor
with StarCluster
Computer
1102
906

FIGURE 11

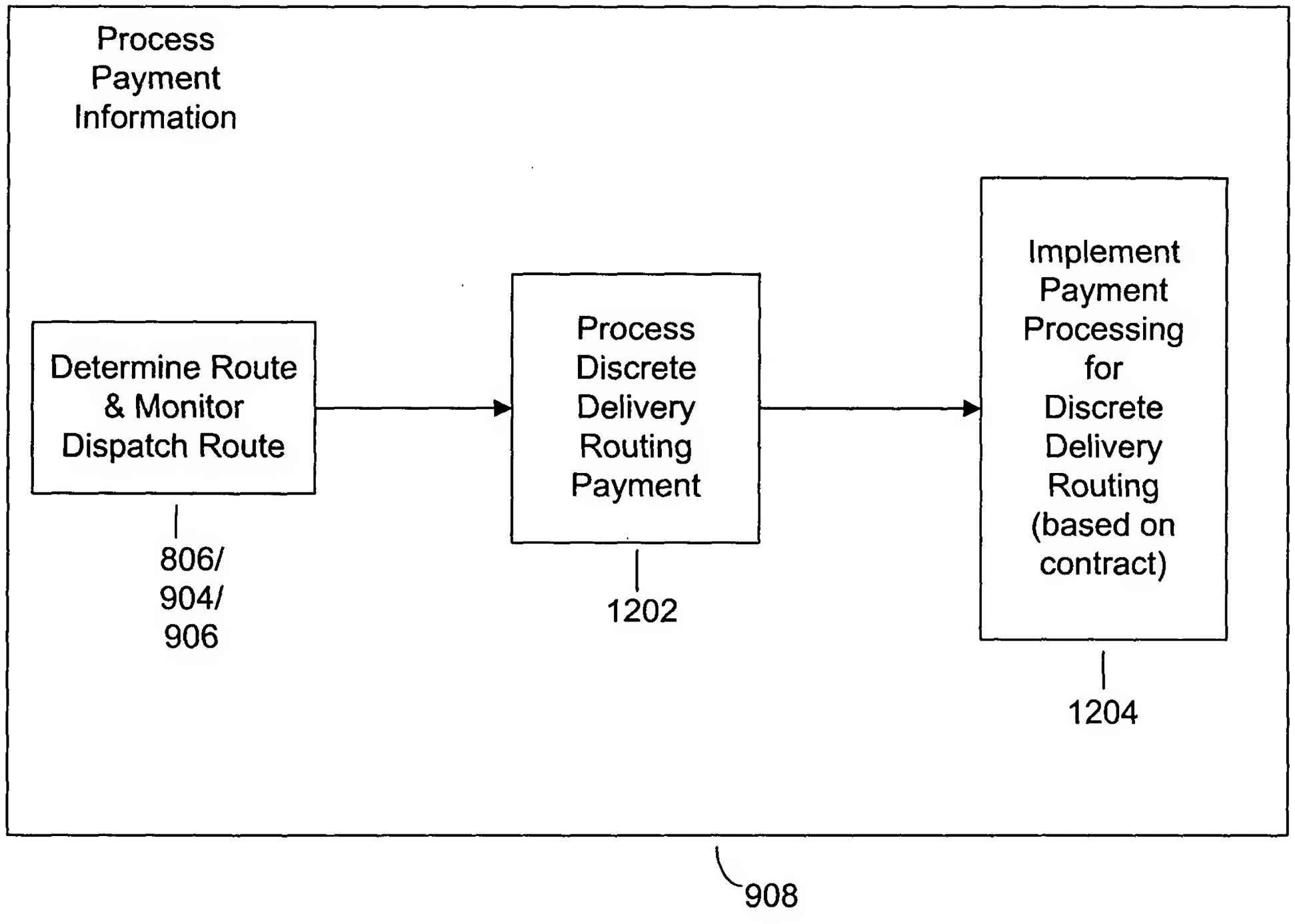
Process Payment Information
Determine Route & Monitor Dispatch Route
806/ 904/ 906
Process Discrete Delivery Routing Payment
1202
Implement Payment Processing for Discrete Delivery Routing (based on contract)
1204
908

FIGURE 12

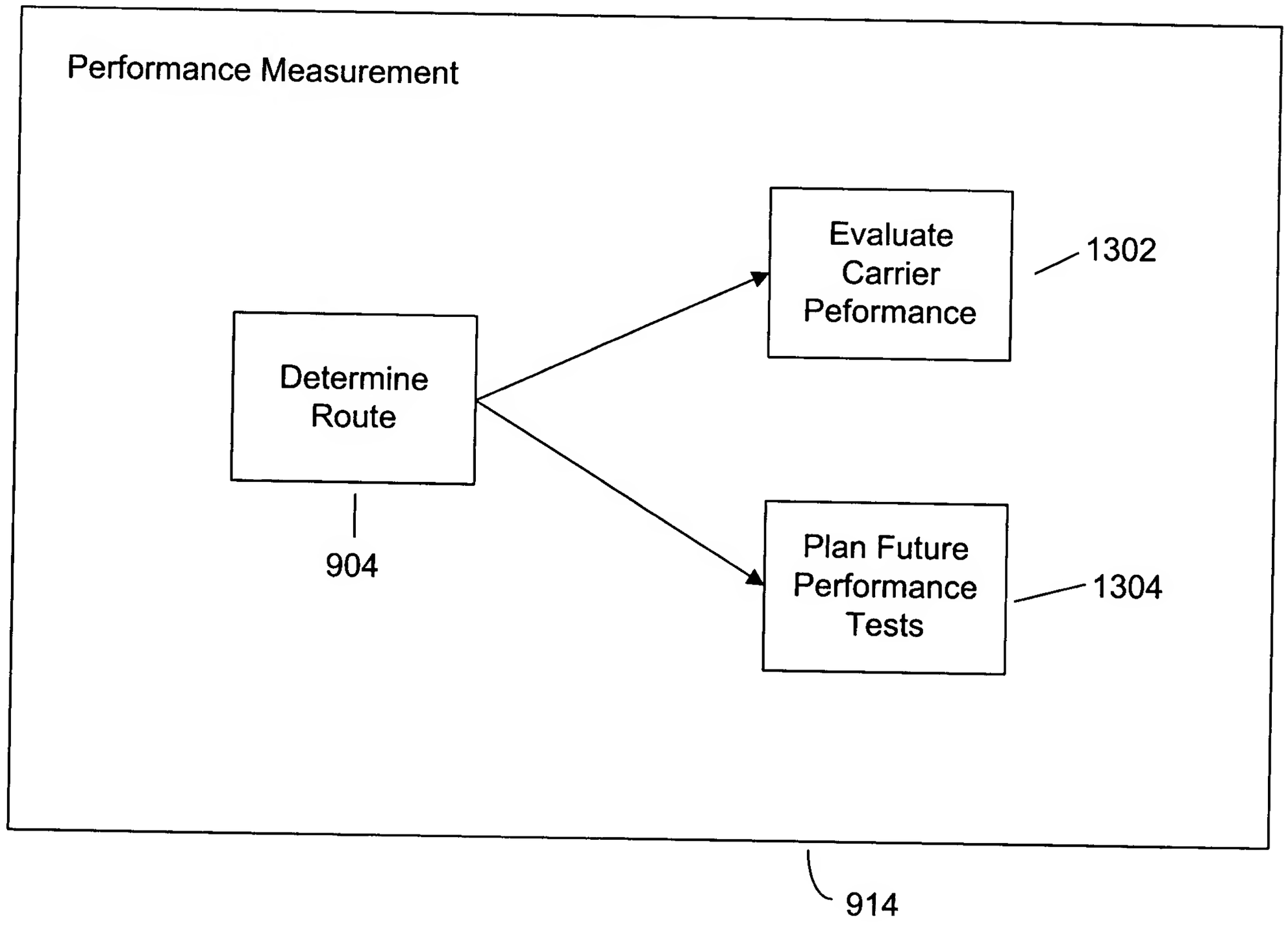
Performance Measurement
Evaluate Carrier Peformance
1302
Determine Route
904
Plan Future Performance Tests
1304
914

FIGURE 13

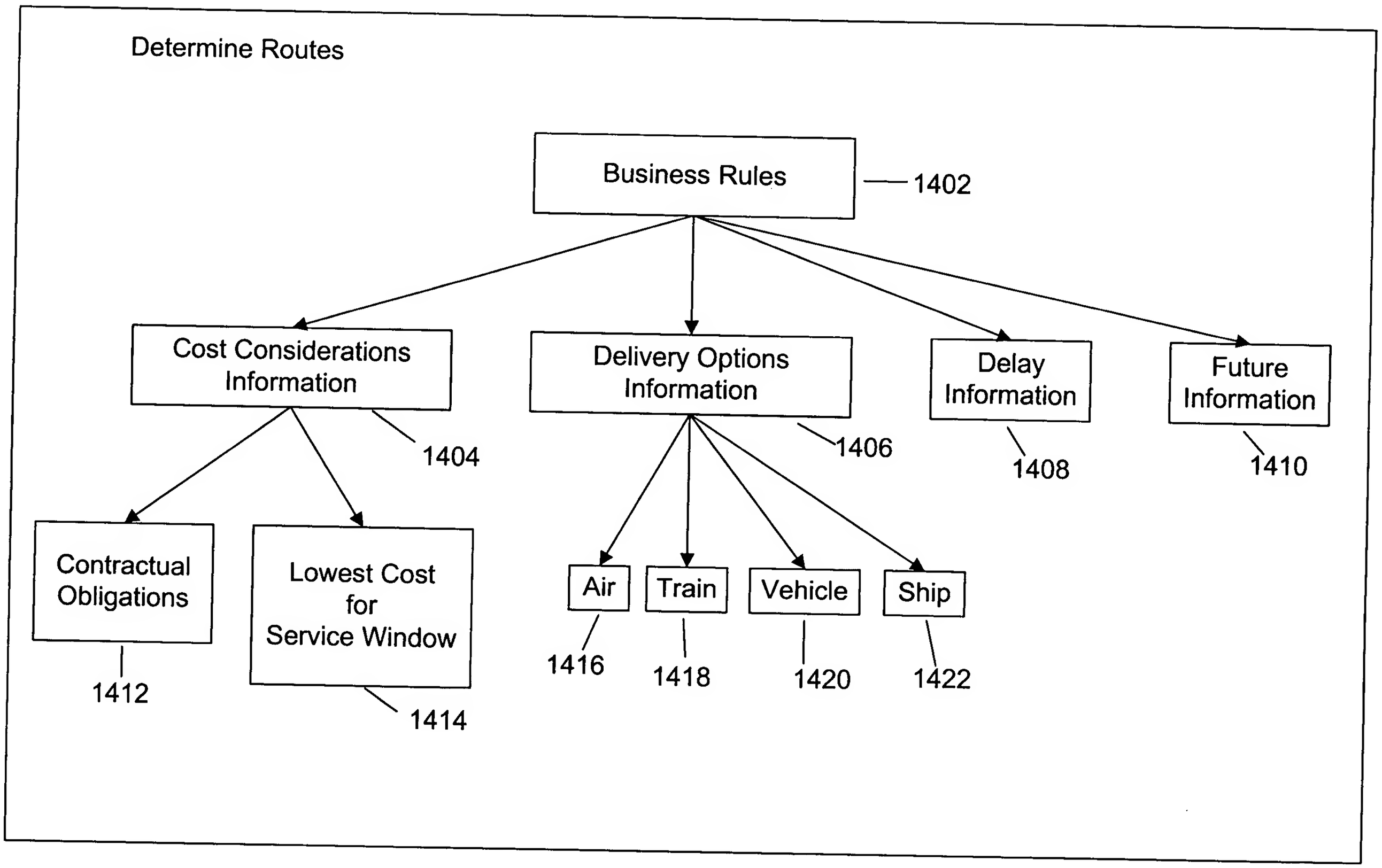
Determine Routes
Business Rules
1402
Cost Considerations Information
1404
Delivery Options Information
1406
Delay Information
1408
Future Information
1410
Contractual Obligations
1412
Lowest Cost for Service Window
1414
Air
1416
Train
1418
Vehicle
1420
Ship
1422

FIGURE 14

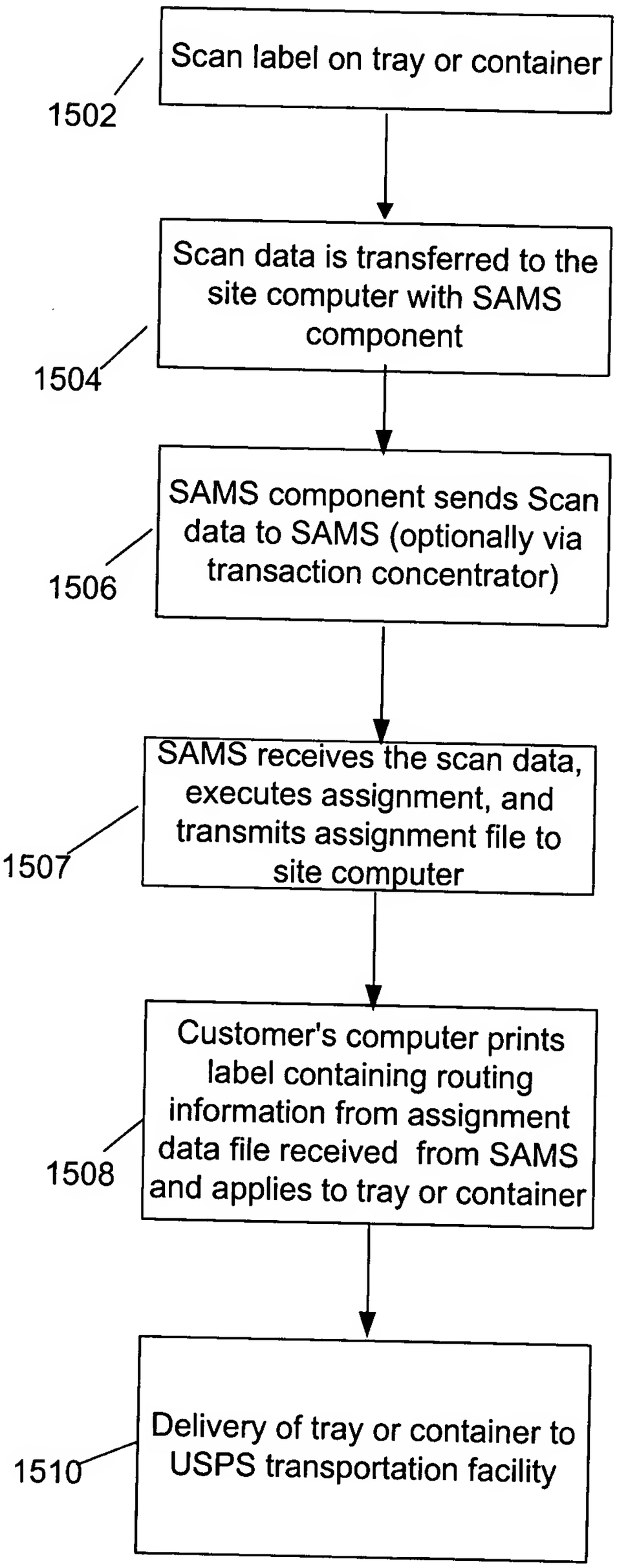
Scan label on tray or container
1502
Scan data is transferred to the site computer with SAMS component
1504
SAMS component sends Scan data to SAMS (optionally via transaction concentrator)
1506
SAMS receives the scan data, executes assignment, and transmits assignment file to site computer
1507
Customer's computer prints label containing routing information from assignment data file received from SAMS and applies to tray or container
1508
Delivery of tray or container to USPS transportation facility
1510

FIGURE 15

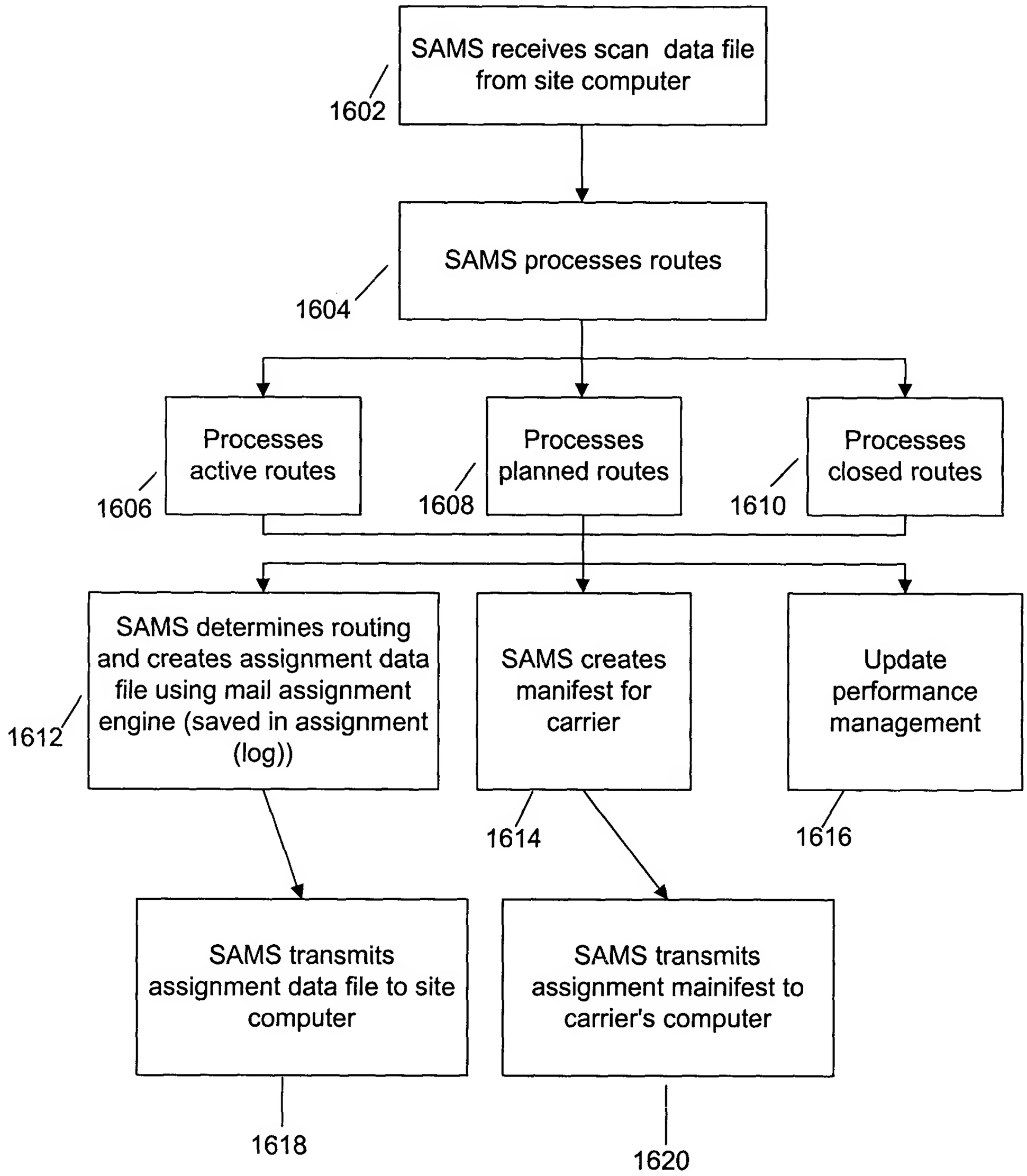
SAMS receives scan data file from site computer
1602
SAMS processes routes
1604
Processes active routes
1606
Processes planned routes
1608
Processes closed routes
1610
SAMS determines routing and creates assignment data file using mail assignment engine (saved in assignment (log))
1612
SAMS creates manifest for carrier
1614
Update performance management
1616
SAMS transmits assignment data file to site computer
1618
SAMS transmits assignment mainifest to carrier's computer
1620

FIGURE 16